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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,995	01/16/2004	Yong-sok Yang	1349.1243	3232

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EXAMINER

GARCIA JR, RENE

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 02/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/757,995

Applicant(s)

YANG, YONG-SOK

Examiner

Rene Garcia, Jr.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 19-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 50 is/are rejected.
- 7) ☒ Claim(s) 2-8 and 14-16 is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/16/04; 1/13/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims 1-18 & 50 drawn to an invention nonelected with traverse in Paper No. 01 December 2005. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
2. Applicant's election with traverse of Species II in the reply filed on 01 December 2005 is acknowledged. The traversal is on the ground(s) that there are no basis to assert that the claims are directed to two distinct inventions; and that there is not a serious burden on the Examiner and that no claim is generic is noted. This is not found persuasive because claims can be restricted by different species. Claims reciting mutually exclusive characteristics are restricted by different species (MPEP 806.04) (Species II, consist of claims 19-49).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 9-13 and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinada et al. (US 6,170,940).

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Shinada et al. discloses the following claimed limitations:

***regarding claim 1, carriage/70/ for an ink cartridge/ink jet type recording unit, 60 & ink cartridge, 50/ of an image forming apparatus/ink jet printer/ comprising: (fig. 1 & 4; ABS; col. 7, lines 21-35)**

***carriage body/bottom board, 71; rear board, 72; right and left side boards, 74 and 73/ (fig. 4; col. 7, lines 62-65) having a mounting portion (fig. 4; col. 7, lines 55-60), in which the ink cartridge/60 & 50/ is accommodated**

***latch/operating lever, 110/ (fig. 4) rotatably disposed at the carriage body to open and close the mounting portion (col. 12, lines 3-12; col. 12, line 54- col. 13, line 24; col. 13, line 56- col. 14, line 19)**

***resilient latch member/spring, 150/ to resiliently bias the latch/110/ in an opening direction (fig. 4)**

***locking unit to lock the latch to the carriage body (col. 12, line 35-42)**
wherein when the latch is unlocked with respect to the carriage body, the locking unit rotates together with the latch, and draws out the ink cartridge from the mounting portion (col. 12, line 54- col. 13, line 14)

***regarding claim 9, carriage/70/ for an ink cartridge/ink jet type recording unit, 60 & ink cartridge, 50/ of an image forming apparatus/ink jet printer/ comprising: (fig. 1 & 4)**

***carriage body having a mounting portion, in which the ink cartridge/60 & 50/ having a latching portion/62b/ is accommodated (col. 12, lines 35-40; fig. 4)**

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*latch rotatably/**unit pressing lever, 120/** disposed at the carriage body to close the mounting portion by locking, that when unlocking with respect to the carriage body, draws the ink cartridge out of the mounting portion (col. 12, lines 35-40; co. 12, line 54- col. 13, line 14; fig. 4 & 22)

*resilient latch member/**spring, 150/** to resiliently bias the latch in an opening direction (fig. 4 & 22)

*locking unit to lock the latch to the carriage body (col. 12, lines 39-41)

*regarding claim 10, latch comprises:

*latch body/**613/** (fig. 21 & 23)

*guide arm/**613c/** extended from the latch body to guide a side surface of the ink cartridge/**50/** (fig. 25a & 25b)

*regarding claim 11, guide arm comprises:

*first guide portion that hooks/**613c/** into the latching portion to lift the ink cartridge/**50/**, when the latch is unlocked (col. 17, lines 5-16; fig. 21 & 23)

*second guide portion/**hinge of latch 613/** extended stepwise from the first guide portion, to guide a side of the latching portion (fig. 25a & 25b)

*regarding claim 12, locking unit comprises:

*locking projection/**613b/** disposed at a sidewall of the carriage body (fig. 25a & 25b)

*hook member/**610a**/ hinged on the latch and selectively hooked into the locking projection/**613b**/

*release handle to release the hook member from the locking projection (col. 16, line 43- col. 17, line 16)

*regarding claim 13, sliding unit/**130**/ that limits an opening angle of the latch with respect to the carriage body(fig. 22; col. 12, lines 3-7)

*regarding claim 50, carriage/**70**/ for an ink cartridge/**50**/, comprising:

*carriage body/**60**/, having an opening, through which the ink cartridge/**50**/ is selectively installed

*latch/**613**/, rotatably connected to the carriage body/**70**/, to selectively open and close the opening (fig. 21 & 22; col. 16, line 43 – col. 17, line 65)

*locking unit/**613b & 610a**/ to lock the latch to the carriage body (fig. 23; col. 14, lines 14-19)

*wherein the ink cartridge is lifted when the latch opens the opening (col. 17, lines 34-40)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinada et al. (US 6,170,940).

Shinada et al. disclose the following claimed limitations:

*regarding claims 17 and 18, first imaginary line, which is parallel to an upper surface of the latch in a locked position, and a second imaginary line, which is parallel to the upper surface of the latch in an opened position, form an interior angle (fig. 25a & 25b; approximately 90°)

Shinada et al. does not disclose the following claimed limitations:

*regarding claim 17, first imaginary line, which is parallel to an upper surface of the latch in a locked position, and a second imaginary line, which is parallel to the upper surface of the latch in an opened position, form an interior angle ranging from about 20° to about 30°

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an interior angle ranging from about 20° to about 30°, for the purpose of limiting the opening range of the latch so it does not interfere with any other function of the image forming device when in the open position. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. **In re Aller, 105 USPQ 233. Range**

*regarding claim 18, wherein the interior angle is approximately 21°

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an interior angle is approximately 21°, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, for the purpose of limiting the opening range of the latch so it does not interfere with any other

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function of the image forming device when in the open position. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980. *Optimum Value*

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize an interior angle from about 20° to about 30°; and approximately 21° as taught by Shinada et al. for the purpose of limiting the opening range of the latch so it does not interfere with any other function of the image forming device when in the open position.

Allowable Subject Matter

7. Claims 2-8 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable claims 2-8 is the inclusion of the limitations being for an image forming apparatus wherein a locking unit comprises: a locking projection disposed at a first wall of the carriage body, hook member, hinged on the latch to be selectively hooked with the locking projection, that when the latch is released, the hook member hooks with the ink cartridge, release handle to release the hook member from the locking projection. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for indicating allowable claims 14-16 is the inclusion of the limitations being for a computer program product wherein sliding unit comprises: sliding

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protrusion disposed on the latch, sliding hole portion disposed on the carriage body opposite to the sliding protrusion, to accommodate the sliding protrusion. It is these limitations found in each of the claims, as they are claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bailey (US 6,481,829) includes a resilient member to keep latch in open direction, a locking unit and plunger. Miyazawa et al. (US 6,250,750) includes a latch, locking unit, biasing member to keep latch in open direction.

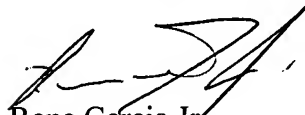
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Communications with the USPTO

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rene Garcia, Jr. whose telephone number is (571) 272-5980. The examiner can normally be reached on M-F 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Rene Garcia Jr.
17 February 2006


K. FEGGINS
PRIMARY EXAMINER